AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1. (Currently Amended) An arbiter in a system, the arbiter comprising:

at least one interface for generating pseudo-grant signals to all requesting master units beginning at the same time and for receiving transaction information from all requesting master units in response to the pseudo-grant signals, wherein

the transaction information includes information on at least one target slave unit for each requesting master unit, and

the arbiter performs arbitration based on the information on the target slave unit for each requesting master unit by using the information on the target slave unit for each requesting master unit to determine a priority of bus ownership for the requesting master units.

2. (Previously Presented) The arbiter of claim 1, the arbiter further performing arbitration based on the transaction information received from all the requesting master units.

3. (Previously Presented) The arbiter of claim 1, the at least one interface including a master interface for generating the pseudo-grant signals to all the requesting master units, for receiving the transaction information from all the requesting master units in response to the pseudo-grant signals, and for generating a ready signal to a selected one of the requesting master units.

4. (Original) The arbiter of claim 3, the master interface including at least one generator for generating the pseudo-grant signals from at least one request signal from all the requesting master units.

5. (Currently Amended) The arbiter of claim 3, the master interface including at least one circuit for converting a target slave ready signal from at least one slave of the at least one target slave into a data transfer ready signal for a selected one of the requesting master units.

6. (Original) The arbiter of claim 3, wherein the ready signal is for data transfer.

7. (Original) The arbiter of claim 3, wherein the ready signal indicates bus availability.

8. (Currently Amended) The arbiter of claim 1, the at least one interface including a controller interface for requesting at least one slave unit to prepare for data transfer in response to the transaction[[target]] information from the selected one of the requesting master units.

9. (Original) The arbiter of claim 8, wherein the controller interface is a slave controller interface which interacts with at least one slave controller of the at least one slave unit.

10. (Original) The arbiter of claim 9, wherein each slave controller controls at least one slave memory.

11. (Original) The arbiter of claim 8, wherein the controller interface is an SDRAM controller interface which interacts with at least one SDRAM controller of the at least one slave unit.

12. (Original) The arbiter of claim 11, wherein each SDRAM controller controls at least one SDRAM memory bank.

13. (Original) The arbiter of claim 1, wherein a request from all the requesting master units is synchronized with a system clock.

14. (Currently Amended) A system comprising:
at least two master units for generating a request;

an arbiter for receiving the request from the at least two master units and for generating pseudo-grant signals beginning at the same time in response to the request from the at least two master units;

the at least two master units supplying target information to the arbiter in response to the pseudo-grant signals; and

at least one slave unit preparing for data transfer in response to the target information supplied by the at least two master units, and wherein

the target information includes information on at least one target slave unit for each requesting master unit, and

the arbiter performs arbitration based on the information on the target slave unit for each requesting master unit by using the information on the target slave unit for each requesting master unit to determine a priority of bus ownership for the requesting master units.

15. (Previously Presented) The system of claim 14, wherein the at least one slave unit completes preparing for data transfer and data is transferred between one of the at least two master units and one of the at least one slave units.

16. (Previously Presented) The system of claim 14, wherein all requesting master units in the system receive the pseudo-grant signals from the arbiter.

17. (Previously Presented) The system of claim 14, wherein the request from the at least two master units is synchronized with a system clock.

18. (Previously Presented) The system of claim 14, wherein the pseudo-grant signals from the arbiter and the target information from the at least two master units are synchronized.

19. (Currently Amended) A method of performing arbitration in a system, comprising:

generating pseudo-grant signals, in response to at least two requests, beginning at the same time, and

receiving target information in response to the pseudo-grant signals, the target information including information on at least one target slave unit associated with each request, and

performing arbitration based on the information on the target slave unit associated with each request by using the information on the target slave unit associated with each request to determine a priority of bus ownership of a plurality of master units generating the at least two requests.

20. (Original) The method of claim 19, further comprising:
performing arbitration based on the target information.

21. (Currently Amended) The method of claim 19, wherein the at least two requests and the target information are from the[[a]] plurality of master units.

22. (Previously Presented) The method of claim 19, wherein the pseudo-grant signals are generated in response to all requests.

23. (Original) The method of claim 19, further comprising:
requesting preparation for data transfer in response to the target information.

24. (Original) The method of claim 19, wherein the request is synchronized with a system clock.

25. (Previously Presented) The method of claim 19, wherein the method is hardware implemented.

26. (Currently Amended) A method of performing arbitration in a system, comprising:
generating at least two requests;
receiving the at least two requests and generating pseudo-grant signals in response to the at least two requests beginning at the same time;
supplying target information in response to the pseudo-grant signals, the target information including information on at least one target slave unit associated with each request; [[and]]
preparing for data transfer in response to the target information; and

performing arbitration based on the information on the target slave unit associated with each request by using the information on the target slave unit associated with each request to determine a priority of bus ownership of a plurality of requesting master units generating the at least two requests.

27. (Currently Amended) The method of claim 26, wherein the at least two requests and the target information are from the[[a]] plurality of requesting master units.

28. (Original) The method of claim 27, further comprising:
completing preparation of data transfer; and
transferring data.

29. (Previously Presented) The method of claim 28, wherein said generating, receiving, supplying, and preparing constitute a first stage and said completing and transferring constitute a second stage and said first and second stages occur concurrently.

30. (Original) The method of claim 29, wherein completing preparation of data transfer includes determining whether a bus is available and selecting one of the requesting masters.

31. (Previously Presented) The method of claim 26, wherein the pseudo-grant signals are generated in response to all requests.

32. (Original) The method of claim 26, wherein the request is synchronized with a system clock.

33. (Previously Presented) The method of claim 26, wherein the method is hardware implemented.

34. (Previously Presented) A computer-readable medium containing instructions which, when executed, causes a machine to perform the method of claim 19.

35. (Previously Presented) A computer-readable medium containing instructions which, when executed, causes a machine to perform the method of claim 26.

36. (Previously Presented) The arbiter of claim 1, wherein the at least one interface generates the pseudo-grant signals to all requesting master units at the same time prior to arbitration.

37. (Previously Presented) The system of claim 14, wherein the arbiter generates the pseudo-grant signals to all requesting master units at the same time prior to arbitration.

38. (Previously Presented) The method of claim 19, wherein the pseudo-grant signals are generated at the same time prior to arbitration.

39. (Previously Presented) The method of claim 26, wherein the pseudo-grant signals are generated at the same time prior to arbitration.

40. (New) The method of claim 1, wherein the arbiter does not perform the arbitration based on priorities pre-assigned to the master units and does not perform the arbitration based on priorities received from the master units.

41. (New) The method of claim 1, wherein the arbiter performs the arbitration based only on the information on the target slave for each requesting master and information received from each of the target slaves for each requesting master.

42. (New) The method of claim 1, wherein the arbiter performs the arbitration based on the transaction information received in response to the pseudo grant signals before receiving additional transaction information.

43. (New) An arbiter in a system, the arbiter comprising:

at least one interface for generating pseudo-grant signals to all requesting master units beginning at the same time and for receiving transaction information from all requesting master units in response to the pseudo-grant signals, wherein

each of the requesting master units sends a first signal to access a target slave to the at least one interface,

the at least one interface generates the pseudo-grant signals beginning at the same time in response to the first signals, and

each of the requesting master units sends the transaction information directly in response to the pseudo-grant signals.

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END OF CLAIM LISTING